Notice of Allowability	Application No.	Applicant(s)	
	10/021,754	BEHZADI, BEHNAM	
	Examiner	Art Unit	
	Mohammad A. Siddiqi	2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *12/19/2005*.

2. ☒ The allowed claim(s) is/are *1,4,6,9,11,14,16,19-21 and 24*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *03/03/2006* .
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

JOHN FOLLANSBEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview Mark Wilson with on 03/01/2006.

2. Please amend the claims as attached.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad A. Siddiqi whose telephone number is (571) 272-3976. The examiner can normally be reached on Monday -Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A. Follansbee can be reached on (571) 272-

3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MAS

JOHN FOLLANSBEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

IN THE CLAIMS:

Please amend the claims as follows:

1. (currently amended) A method for protecting a label switched path (LSP) between two label switch routers (LSRs) in a ring network that utilizes multiprotocol label switching (MPLS) ~~a label switching protocol~~ to communicate packets of information, wherein each LSR in said ring network is connected to a right side neighbor LSR and a left side neighbor LSR by respective links, said method comprising:

identifying a working LSP between first and second neighbor LSRs in said ring network, said working LSP having a first direction around said ring network;

establishing a protection LSP between said first and second neighbor LSRs for communicating packets between said first and second neighbor LSRs in the event of a failure of the link that is utilized by said working LSP, said protection LSP utilizing said ring network and having an opposite direction to said first direction; ~~and~~

switching packets from said working LSP to said protection LSP in response to a failure of said link that is utilized by said working LSP, wherein switching packets from said working LSP to said protection LSP includes

adjusting time-to-live (TTL) values of said packets to account for the number of LSRs that are along said protection LSP;

switching packets from said protection LSP to a next hop working LSP after said packets have traversed said protection LSP; and

using TTL values from packets that have traversed said protection LSP to generate TTL values for said packets that are switched to said next hop working LSP from said protection LSP.

2. (canceled)

3. (canceled)

4. (original) The method of claim 1 wherein switching packets from said working LSP to said protection LSP includes switching the label of a packet from a working label to a protection label.

5. (canceled)

6. (currently amended) The method of claim 1~~5~~ wherein adjusting said TTL values includes adding N to said TTL values, where N is a function of the number of LSRs along said protection LSP.

7. (canceled)

8. (canceled)

9. (original) The method of claim 1 further including establishing at least one protection LSP for each link between neighbor LSRs on said ring network.

10. (canceled)

11. (currently amended) A system for protecting a label switched path (LSP) between two label switch routers (LSRs) in a ring network that utilizes multiprotocol label switching (MPLS) ~~a label switching protocol~~ to communicate packets of information between LSRs in said ring network, wherein each LSR in said ring network is connected to a right side neighbor LSR and a left side neighbor LSR by respective links, each LSR in said ring network comprising:

a label switching module, associated with an LSR, for identifying a working LSP between said LSR and a neighbor LSR, said working LSP having a first direction around said ring network; and

a failure protection module for:

establishing a protection LSP between said LSR and said neighbor LSR that enables packets to be communicated between said LSR and said neighbor LSR in the event of a failure of the link that is utilized by said working LSP, said protection LSP utilizing said ring network and having an opposite direction to said first direction; ~~and~~

switching packets from said working LSP to said protection LSP in response to a failure of said link that is utilized by said working LSP, wherein switching packets from said working LSP to said protection LSP includes adjusting TTL values of said packets to account for the number of LSRs that are along said protection LSP;

switching packets from a protection LSP to a next hop working LSP after said packets have traversed said protection LSP; and

using TTL values from packets that have traversed said protection LSP to generate TTL values for said packets that are switched to said next hop working LSP from said protection LSP.

12. (canceled)

13. (canceled)

14. (original) The system of claim 11 wherein switching packets from said working LSP to said protection LSP includes switching the label of a packet from a working label to a protection label.

15. (canceled)

16. (currently amended) The system of claim 11~~15~~ wherein adjusting said TTL values includes adding N to said TTL values, where N is a function of the number of LSRs along said protection LSP.

17. (canceled)

18. (canceled)

19. (original) The system of claim 11 wherein said failure protection module includes logic for establishing unique protection LSPs for working LSPs that utilize the link between said LSR and said neighbor LSR.

20. (currently amended) A method for protecting a label switched path (LSP) between two label switch routers (LSRs) in a ring network that utilizes multiprotocol label switching ~~a label switching protocol~~ to communicate packets of information, wherein each LSR in said ring

network is connected to a right side neighbor LSR and a left side neighbor LSR by respective links, said method comprising:

identifying a working LSP between first and second neighbor LSRs in said ring network, said working LSP having a first direction around said ring network;

establishing a protection LSP between said first and second neighbor LSRs for communicating packets between said first and second neighbor LSRs in the event of a failure of the link that is utilized by said working LSP, said protection LSP utilizing LSRs on said ring network and having an opposite direction to said first direction;

switching packets from said working LSP to said protection LSP in response to a failure of said link that is utilized by said working LSP; ~~and~~

adjusting TTL values of said switched packets by a value that is a function of the number of LSRs along said protection LSP;

switching packets from said protection LSP to a next hop working LSP after said packets have traversed said protection LSP; and

using TTL values from packets that have traversed said protection LSP to generate TTL values for said packets that are switched to said next hop working LSP from said protection LSP.

21. (original) The method of claim 20 wherein adjusting said TTL values includes adding N to said TTL values, where N is a function of the number of LSRs along said protection LSP.

22. (canceled)

23. (canceled)

24. (original) The method of claim 20 further including establishing at least one protection LSP for each link between neighbor LSRs on said ring network.

25. (canceled)